

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Trade: \_\_\_\_\_

DC/LU: \_\_\_\_\_

Assessor: \_\_\_\_\_

**Evaluation:** During the On-the-Job (OJL) assessment, students are required to demonstrate proficiency in the identified discipline/s and their related competencies through assigned activities. Students will be rated as **SKILLED (1)** or **REMEDIATION (2)**

### INDUSTRIAL COATINGS and LINING APPLICATION SPECIALIST (CAS)

Competency	Performance Rating	Date Completed	Assessor's Initials	Student's Initials
<b>4.1 HEALTH AND SAFETY AWARENESS</b>				
<ul style="list-style-type: none"> <li>Don (put on), doff (remove), inspect, and maintain the proper PPE that should be worn during painting and decorating application including, but not limited to:               <ul style="list-style-type: none"> <li>Head</li> <li>Face</li> <li>Eyes</li> <li>Ears</li> <li>Hands</li> <li>Body</li> <li>Feet</li> <li>Respiratory</li> </ul> </li> </ul>	1 2			
<ul style="list-style-type: none"> <li>Perform a job analysis for safe working conditions:               <ul style="list-style-type: none"> <li>Attend pre-job safety meetings</li> <li>Adhere to site specific safety rules and federal regulations</li> <li>Observe Vessel Entry/Confined Space regulations</li> <li>Read and interpret MSDS</li> <li>Establish and maintain a safe working perimeter</li> </ul> </li> </ul>	1 2			
<ul style="list-style-type: none"> <li>Safely demonstrate the proper use and maintenance of tools and equipment.</li> </ul>	1 2			
<ul style="list-style-type: none"> <li>Maintain clean work areas (housekeeping).</li> </ul>	1 2			
<ul style="list-style-type: none"> <li>Demonstrate how to perform positive and negative fit checks on selected respirators.</li> </ul>	1 2			
<ul style="list-style-type: none"> <li>Use selected monitoring equipment to measure the atmosphere in a</li> </ul>	1 2			

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confined space.				
• Recognize the symptoms associated with excess exposure to heat and cold.	1 2			
• Store, handle, and transport tools, equipment and materials properly.	1 2			
• Identify the locations of First Aid and Fire Equipment.	1 2			
• Correctly use fall arresting and other fall protection equipment.	1 2			
• Demonstrate safe work practices for erecting and dismantling scaffolds, including: pre-planning, inspecting scaffold components, load capacity, platform construction, access requirements, and fall protection.	1 2			
• Demonstrate a pre-inspection and the safe operation of an aerial lift.	1 2			
• Describe and demonstrate the proper use of various types of personal fall protection equipment.	1 2			
• Describe and demonstrate the steps of ladder safety, including: selection, inspection, setup, safe techniques and proper maintenance and storage.	1 2			
• Use flags and paddles to safely control vehicle movements around work zones in accordance with state and national guidelines.	1 2			
• Demonstrate the measurement of a selected containment ventilation air pressure and/or air flow requirement using the appropriate instrumentation.	1 2			
• Recognize and describe a selected emission quality assessment method.	1 2			
• Perform and explain the procedures for conducting forklift inspections.	1 2			
• Calculate load weight and determine forklift capabilities for that load.	1 2			
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<b>4.2 INTRODUCTION TO INDUSTRIAL COATINGS</b>				
• Demonstrate the characteristics of a professional Industrial Coating and Lining Application Specialist:	1 2			
• Exhibit suitable appearance and personal hygiene.	1 2			
• Exhibit proper attitude and behavior on the job site, including private residences and other occupied buildings.	1 2			
• Deal with difficult customers in a professional and courteous manner.	1 2			

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• Interpret written and verbal instructions.	1 2			
• Recognize the importance of cooperation and interaction with related trades on a job site.	1 2			
• Demonstrate the ability to follow specific work place protocol and procedures.	1 2			
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<b>4.3 MATERIALS AND CORROSION</b>				
• Recognize the critical role of the applicator in providing protection from corrosion.	1 2			
• Recognize the 8 basic forms of corrosion.	1 2			
• Demonstrate the 5 basic methods of mitigating corrosion.	1 2			
• Select conditions that meet project demands in various conditions and service environments..	1 2			
• Set-up of a jobsite including selection of trailers, storing flammable liquids, waste thinner, hazardous lead waste, and tarps.				
• Demonstrate the ability to tie knots correctly and understand the different types of knots used in Industrial applications.	1 2			
• Store, handle, and transport tools, equipment and materials properly.	1 2			
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<b>4.4 SURFACE PREPARATION</b>				
• Apply proper surface preparation techniques to achieve the maximum level of protection available through protective coatings systems.	1 2			
• Create a surface that meets industry standards defining an achievable surface cleanliness level.	1 2			
• Demonstrate the safe and appropriate application of surface preparation techniques: <ul style="list-style-type: none"> <li>○ Solvent cleaning</li> <li>○ Hand tool cleaning</li> <li>○ Power tool cleaning</li> <li>○ Water jetting</li> <li>○ Chemical stripping</li> <li>○ Abrasive blast cleaning</li> <li>○ Vacuum blast cleaning</li> <li>○ Centrifugal blast cleaning</li> <li>○ Sodium bicarbonate blast cleaning</li> <li>○ Sponge jetting</li> <li>○ Carbon dioxide blast cleaning</li> <li>○ Laser removal</li> </ul>	1 2			

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• Demonstrate and describe the proper use, maintenance and storage of surface preparation tools and equipment.	1 2			
• Demonstrate solvent hand tool cleaning, safety, PPE, methods, care, and repair SSPC – SP1.	1 2			
• Demonstrate power tool safety, PPE, methods of use, standards, and inspection SSPC – SP3.	1 2			
• Demonstrate the proper setup of compressor, blast pot, and separators with control valves, hose and coupling layout.	1 2			
• Demonstrate abrasive blasting system operation guidelines: warnings and hazards, pre-start, daily checks, start-up, operation, and shutdown.	1 2			
• Create a surface that meets industry standards defining an achievable surface cleanliness level.	1 2			
• Demonstrate the proper use, care, PPE, and inspection of water cleaning and water jetting				
• Recognize and describe surface preparation of concrete in accordance with SSPC – SP13/NACE 6.				
• Measure ambient conditions				
• Determine when to measure ambient conditions.				
• Recognize when coating operations should not be permitted due to adverse ambient conditions.				
• Identify and employ troubleshooting techniques and procedures.				
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<b>4.5 SPRAY APPLICATIONS</b>				
• Demonstrate proper spray techniques for each of the spray systems and troubleshoot spray pattern problems.	1 2			
• Demonstrate proper care and maintenance of spray equipment.	1 2			
• Demonstrate appropriate use and safe handling of spray equipment.	1 2			
• Recognize, select, and demonstrate the following equipment for coating application: <ul style="list-style-type: none"> <li>○ Brushes and rollers</li> <li>○ Conventional sprayers</li> <li>○ Airless and air-assisted airless sprayers</li> <li>○ Electrostatic sprayers</li> <li>○ Plural component proportioning equipment</li> <li>○ Wire flame and wire arc sprayers</li> <li>○ Dry powder coating application processes</li> </ul>	1 2			

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○ HVLP Sprayers				
• Demonstrate the proper selection of primers, paints and stains for various residential or commercial applications.	1 2			
• Demonstrate thermo spraying methods, i.e., wire flame, powder flame, electric arc and plasma.	1 2			
• Demonstrate safe and proper methods to mix paint.	1 2			
• Demonstrate proper use of wet film thickness gauge.	1 2			
• Demonstrate the procedures required to clean and lubricate a spray gun.	1 2			
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<b>4.6 COATINGS</b>				
• Demonstrate proper use of wet film thickness gauge.	1 2			
• Demonstrate quality inspection procedures for monitoring ambient air, surface temperature, and surface profile.	1 2			
• Interpret manufacturer's catalog product data sheets to determine recommended uses and product/performance characteristics for industrial coatings.	1 2			
• Use Material Safety Data Sheets (MSDSs) to determine the hazards, appropriate personal protective equipment, and other safety-relevant information pertaining to the use of industrial coatings.	1 2			
• Use manufacturer's coating application bulletins to determine the proper surface preparation and application procedures required for use with industrial coatings.	1 2			
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<b>4.7 SPECIALTY APPLICATIONS</b>				
<i>Concrete</i>				
<ul style="list-style-type: none"> <li>• Account for the effect each component has on concrete composition.</li> <li>• Determine Alkali – Aggregate Reaction and Moisture Vapor Transmissions.</li> <li>• Demonstrate the treatment and repair of concrete irregularities, joints and cracks.</li> <li>• Demonstrate product mixing and thinning techniques.</li> <li>• Conduct an adhesion test of a coating over concrete.</li> </ul>	1 2			

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<i>Plural Components</i> <ul style="list-style-type: none"> <li>Determine the appropriate use of plural component application.</li> <li>Recognize and troubleshoot common problems associated with industrial coatings applied by the plural-component spray method.</li> </ul>	1 2			
<i>Thermal Spray</i> <ul style="list-style-type: none"> <li>Demonstrate correct and safe operating procedures during electric arc spraying.</li> <li>Demonstrate the ability to apply a thermal spray coating using the arc-spray method and employ the bend test, cut test, and ensile strength bond inspection tests as described.</li> <li>Employ safe operating procedures during electric arc spraying.</li> </ul>	1 2			
<i>Waterjetting</i> <ul style="list-style-type: none"> <li>Don and doff the proper PPE for waterjetting tasks.</li> <li>Perform daily inspection procedures and identify equipment problems.</li> <li>Evaluate surfaces if the required level of cleanliness has been achieved.</li> </ul>	1 2			
<i>Powder Coatings</i> <ul style="list-style-type: none"> <li>Demonstrate and describe the two basic powder application systems and their components.</li> <li>Select the most appropriate method of powder coating application for the job.</li> <li>Demonstrate the basics of operating, cleaning, and maintaining the equipment in powder coating systems.</li> </ul>	1 2			
<i>Pipeline Coatings</i> <ul style="list-style-type: none"> <li>Specify inspection testing of pipeline coatings to identify defects and the appropriate methods of repairing them.</li> <li>Demonstrate plant and field application of pipeline coating systems with different materials and methods of application.</li> </ul>	1 2			
<i>Electrostatic Spray</i> <ul style="list-style-type: none"> <li>Demonstrate and describe the use of automated and manual systems.</li> <li>Demonstrate operational and safety guidance.</li> </ul>	1 2			
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<b>4.8 CONTRACTOR QUALITY MANAGEMENT</b>				
<ul style="list-style-type: none"> <li>Demonstrate the ability to determine WFT by notch gauge, DFT by SSPC – PA 2, adhesion by tape method, and dryness or state of cure.</li> </ul>	1 2			

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<ul style="list-style-type: none"> <li>• Demonstrate a working knowledge of the requirements and standards that apply to the various tasks involved in the QC inspection process, including:               <ul style="list-style-type: none"> <li>• Pre-surface preparation inspection</li> <li>• Measurement of ambient conditions</li> <li>• Evaluation of compressor, air cleanliness, and surface preparation equipment</li> <li>• Determination of surface preparation, cleanliness, and profile</li> <li>• Mixing and thinning of coating materials</li> <li>• Evaluation of application equipment</li> <li>• Inspecting coating application and cleanliness between coats</li> <li>• Determination of wet-film and dry-film thickness</li> <li>• Pinhole and holiday testing</li> <li>• Evaluating adhesion/cure</li> </ul> </li> </ul>	1 2			
<ul style="list-style-type: none"> <li>• Demonstrate how to calibrate and use the test equipment and instruments needed to verify compliance with the various QC inspection tasks.</li> </ul>	1 2			
<ul style="list-style-type: none"> <li>• Demonstrate how to fill out the various forms used to record the results of QC inspections.</li> </ul>	1 2			
<ul style="list-style-type: none"> <li>• Apply antiqued finishes to a properly prepared surface using methods such as rubbing with steel wool and spattering.</li> </ul>	1 2			

**Comments**

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(Signature)

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(Date)